

Re: From Zhishi

Zhishi Guo <Guo.ZhishiLNDU@usepa.onmicrosoft.com>

Tue 1/10/2012 8:35 AM

To: Liu, Xiaoyu <Liu.Xiaoyu@epa.gov>

Xiaoyu:

Let's discuss it after I come back. I will discuss our results only at the meeting today.

Zhishi

From: Xiaoyu Liu/RTP/USEPA/US
To: Zhishi Guo/RTP/USEPA/US@EPA
Date: 01/10/2012 08:24 AM
Subject: Re: From Zhishi

Zhishi,

In the report page 74 (2nd paragraph) and one of their publication, they added toluene then ethanol/water then hexane.

I checked my notes taken from the visit, they did not add toluene when they showed us the procedure. I called Corey this morning, he said he watched the video we took, he did not remember they added toluene for extraction. Maybe toluene makes the difference? Should we ask NASA or do a quick extraction test?

Xiaoyu

From: Zhishi Guo/RTP/USEPA/US
To: Xiaoyu Liu/RTP/USEPA/US@EPA
Date: 01/10/2012 08:07 AM
Subject: Re: From Zhishi

Xiaoyu:

According to the report, they **wet the sample with hexane** first before adding 1:1 ethanol/water.

Zhishi

From: Xiaoyu Liu/RTP/USEPA/US
To: Zhishi Guo/RTP/USEPA/US@EPA
Date: 01/10/2012 08:03 AM
Subject: Re: From Zhishi

Zhishi,

Yes. the first round we used hexane, ethanol, and water. The procedure was:

1. Add 100 uL of RCS to the sample vial containing the treated substrate.
2. Add 10 mL of a 1:1 EtOH:Water solution to vial.
3. Sonicate for 30 minutes.

5. Add 10 mL of hexane to the vial.
6. Sonicate for 30 minutes.
7. Remove top hexane layer and transfer it to a new vial containing 1-2 g of sodium sulfate.

For the 2nd round, we only used hexane. The procedure was:

1. Add 100 uL of RCS to the sample vial containing the treated substrate.
2. Add 10 mL of Hexane to the vial.
3. Sonicate for 30 minutes.
- 4.. Decanted hexane layer and transfer it to a new vial containing 1-2 g of sodium sulfate.
5. An aliquot (~1.5 mL) of the solution is transferred from the amber scintillation vial into a screw-top vial containing 3 mL of sulfuric acid.

The sample is shaken for 30 seconds and then let sit until separation has occurred. An aliquot of the top layer (hexane) is transfer into

2 mL vial and the sulfuric acid layer is discarded.

Xiaoyu

From: Zhishi Guo/RTP/USEPA/US
To: Xiaoyu Liu/RTP/USEPA/US@EPA
Date: 01/10/2012 07:14 AM
Subject: From Zhishi

Xiaoyu:

In page 74 of the NASA report, they cited an extraction method that uses hexane, ethanol, and water. Was it the method we used in the first round of tests?

Could you **briefly** describe the extraction procedure? Please reply by 9:30. Many thanks.

Zhishi